WHAT IS CLAIMED IS:

1. An isolated nucleic acid segment comprising at least a first isolated coding region that encodes a first peptide of between 18 and about 24 amino acids in length that comprises an amino acid sequence that is at least about 88% identical to the amino acid sequence of SEQ ID NO:2.

2. The nucleic acid segment of claim 1, wherein said at least a first isolated coding region encodes a first peptide that comprises an amino acid sequence that is at least about 94% identical to the amino acid sequence of SEQ ID NO:2.

3. The nucleic acid segment of claim 2, wherein said at least a first isolated coding region encodes a first peptide comprising the amino acid sequence of SEQ ID NO:2.

4. The nucleic acid segment of claim 3, wherein said at least a first isolated coding region encodes a first peptide that has the amino acid sequence of SEQ ID NO:2.

5. The nucleic acid segment of claim 3, wherein said at least a first isolated coding region comprises the nucleotide sequence of SEQ ID NO:1.

6. The nucleic acid segment of claim 5, wherein said at least a first isolated coding region has the nucleotide sequence of SEQ ID NO:1.

7. The nucleic acid segment of claim 1, wherein said at least a first isolated coding region is positioned under the control of a promoter.

8. The nucleic acid segment of claim 1, wherein said nucleic acid segment further comprises at least a second isolated coding region that encodes a second protein, polypeptide or peptide.

9. The nucleic acid segment of claim 8, wherein said at least a first isolated coding region is operatively attached, in frame, to said at least a second isolated coding region and wherein said nucleic acid segment encodes a fusion protein in which said first peptide is linked to said second protein, polypeptide or peptide.

10. The nucleic acid segment of claim 8, wherein said at least a second isolated coding region encodes a second, distinct *Coccidioides spp.* protein, polypeptide or peptide.

11. The nucleic acid segment of claim 10, wherein said at least a second isolated coding region encodes a second, distinct polypeptide or peptide sequence from SEQ ID NO:4.

12. The nucleic acid segment of claim 8, wherein said at least a second isolated coding region encodes an adjuvant protein, polypeptide or peptide.

13. The nucleic acid segment of claim 1, further defined as a recombinant vector.

14. The nucleic acid segment of claim 1, comprised within a recombinant host cell.

15. The nucleic acid segment of claim 1, comprised within a pharmaceutically acceptable carrier or diluent.

16. A recombinant vector that comprises at least a first isolated nucleic acid segment in accordance with claim 1.

17. A recombinant host cell that comprises at least a first isolated nucleic acid segment in accordance with claim 1.

18. The recombinant host cell of claim 17, wherein said host cell further comprises at least a second isolated coding region that encodes a second, distinct *Coccidioides spp.* protein, polypeptide or peptide.

19. The recombinant host cell of claim 17, wherein said host cell is a prokaryotic host cell.

20. The recombinant host cell of claim 17, wherein said host cell is a yeast host cell or a mammalian host cell.

21. A composition comprising at least a first isolated nucleic acid segment in accordance with claim 1.

22. The composition of claim 21, wherein said composition further comprises at least second isolated coding region that encodes a second, distinct *Coccidioides spp.* protein, polypeptide or peptide.

23. The composition of claim 21, wherein said composition comprises a pharmaceutically acceptable carrier or diluent.

24. The composition of claim 21, wherein said composition further comprises at least a first adjuvant.

25. A vaccine formulation comprising, in a pharmaceutically acceptable form, an immunologically effective amount of at least a first isolated nucleic acid segment in accordance with claim 1.

26. A method for generating an immune response, comprising providing to an animal an immunologically effective amount of at least a first isolated nucleic acid segment in accordance with claim 1.

27. The method of claim 26, wherein said animal has, is suspected of having or is at risk for developing coccidioidomycosis.

28. The method of claim 26, wherein said animal is a human subject.

29. A method for treating or preventing coccidioidomycosis, comprising administering to an animal having, suspected of having or at risk for developing coccidioidomycosis a therapeutically or prophylactically effective amount of at least a first isolated nucleic acid segment in accordance with claim 1.

30. An isolated peptide of between 18 and about 24 amino acids in length that comprises an amino acid sequence that is at least about 88% identical to the amino acid sequence of SEQ ID NO:2.

31. A composition comprising at least a first isolated peptide in accordance with claim 30.

32. A method for generating an immune response, comprising providing to an animal an immunologically effective amount of at least a first isolated peptide in accordance with claim 30.